

ABSTRACT OF THE DISCLOSURE

Commercially available Alum solution is added to raw influent . All aerated stabilization basins , aerated systems are eliminated . Since secondary biological treatment is not required , the 100% elimination of aerators' horsepower and maintenance results in direct economic electrical energy savings to the Pulp and Paper industry . Likewise aluminum chloride replacing Alum may be added to raw influent ; ferric chloride may be substituted ; ferrous sulfate may be substituted ; ferrous sulfate and sulfuric acid may be added to raw influent ; barium chloride and hydrochloric acid are substituted ; or barium sulfide , borax, and sodium silicate are substituted . The fraudulent , defective deficiencies of the Biochemical Oxygen Demand (BOD) test utilized alone are revealed. Process also involves continuous in-line pH controller for raw influent for adjustment of raw influent pH to range of 5.7 to 6.0 for optimum removal efficiencies . Involves a continuous in-line Chemical Oxygen Demand Analyzer in outlet of primary clarifiers. The precipitate is thickened , dewatered and incinerated , and some chemicals regenerated . Depending on amount of power boilers ash in raw influent approximately 65% to 80% of chemicals may be recycled and approximately 20% to 35% of dewatered sludge wasted because of inert boiler ash.